

REMARKS

Claims 1-26 are pending in this application, with claims 1, 8, 15, 18, 21, and 24 being independent. Independent claims 1, 8, 15, 18, 21, and 24 have been amended along with claims 2, 3, 9, 10, 16, 19, 20, 22, 23, 25 and 26. No new matter has been added by way of these amendments. Favorable reconsideration and reexamination is respectfully requested in view of the foregoing amendments and the following comments of the Applicants, which are proceeded by related comments of the Examiner in small bold type:

Claim Rejections - 35 USC 112

Claims 8-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 8 recites the limitation "on a computer-readable medium" which is not supported in the disclosure.

Claims 9-14 depend on claim 8, thus are rejected under the same basis.

The Applicant respectfully disagrees. The specification of the subject application describes various types of computer-readable media. For example, the specification reads:

Packet classifier 96, exception packet manager 102, and packet forwarder 106 executed on switch device 94 are typically stored in memory 100. However, in other arrangements either one or more of the packet classifier 96, the exception packet manager 102, or the packet forwarder 106 are stored in a storage device (e.g., a hard drive, CD-ROM, etc.) in communication with the switch device 94. (Specification, page 20, lines 5-11.)

Thus, memories and other types of storage devices such as hard drives and CD-ROMs may be implemented as computer-readable media. Accordingly, Applicants submit "a computer-readable medium," as recited in independent claim 8 is described in the specification.

Double Patenting

Claims 1,3-5, 7-8, 10-12, 14-15, 17-18, 20-21, 23-24 and 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-5, 7-9, 11-12, 14-15, 16, 18-19, 21-

22, and 24-25, of copending Application No. 10/749,792, respectively, in view of Sallet *et al* (US 6,490,276). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite substantially same limitations, except delivering the packet to an exception processor being shared by the packet forwarding device in the stack. Sallet discloses a method for forwarding a data frame from a first switch to a second switch, thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Sallet's method of forwarding data frames to the instance application in order to transmit data effectively.

Applicants will consider filing a terminal disclaimer upon an indication of allowable subject matter.

Claim Rejections - 35 USC 103

Claims 1-4, 7-11, 14-17 and 18-26 are rejected under 35 U.S.C. 103(a) as being anticipated by Salett *et al* (US 6,490,276), hereinafter Salett, in view of Kalkunte *et al* (US 7,139,269).

Regarding claims 1, 8, 15, 18, 21 and 24, Salett discloses a method comprising:

inserting a vector in a packet that identifies a first device in a stack of packet forwarding devices that delivers the packet to an exception processor (e.g., a 64-bit header is used to indicate the source and destination information for each set of data frames transmitted on the network. The encoding is preferably in a vector form of 1 bit per port; col. 3: lines 44-63 and col. 4: lines 15-21).

However, Salett does not explicitly call for the exception processor being shared by the packet forwarding devices in the stack.

As shown in Figure 41, Kalkunte teaches the server (port 8) is being shared by clients (ports 1-6).

Kalkunte's shared exception processor is a well-known configuration in the art, e.g., a router routes traffic for many sources or a server can be shared among/connected to many clients. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made that Kalkunte's shared exception processor is a viable option in Salett's system.

Amended independent claim 1 is directed to a method that includes receiving a packet at a first device in a stack of packet forwarding devices that are configured to direct the packet to a destination external to the stack. The method also includes identifying an exception associated with the packet, and inserting a vector in the packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack.

Neither Salett nor Kalkunte, alone or in combination, disclose or would have made obvious the features of amended independent claim 1.

To the contrary, Salett describes data communication between stations on a network. Each station is associated with one or more corresponding ports. Information included in the header of a data frame is used to identify a source port and destination port. Based on the information, the data frame is transferred from the station associated with the source port to a station associated with the destination port. In this regard, Salett reads:

A method and apparatus for providing data communication between stations on a network which optimizes the amount of resources required for a network switch. (Salett, Abstract.)

The operation of the present invention is illustrated by an example where station A 215 sends information to station B 223, as shown in FIG. 2. The network initially does not know which stations are associated with which ports or switches, and preferably must learn the associations as data frames are sent through the network, as described below. When station A 215 first transmits a data frame, it is received by switch 205 on port 4. The CAM 213 in switch 205 updates a station list contained in the CAM 213 to indicate that station A 215 is on port 4. For preferably only on the stack bus, the switch 205 then updates the header information of the data frame to indicate that it originated from switch 205. In one embodiment of the present invention, the SRC_PORT or local port bits of the packet bus and stack header of the data frame are encoded with the originating switch. Switch 205 also reads the destination station from the header information of the data frame, which in the present example is station B 223. Switch 205 compares the destination station of the data frame with its station list. If the data frame is the first data frame transmitted through the switch 205 which has station B 223 as a destination station, station B 223 will not be found in the station list of switch 205. Switch 205 then sends or "floods" the data frame out all ports on switch 205 and to all other switches on the network. Flooding is typically implemented by asserting all bits in the CAM cycle, including stack box bits, except for the source port bit. (Id., col. 4, lines 33-59.)

As such, Salett is understood to describe transmission of data frames from a source to a destination on a network. However, Salett appears silent regarding packet forwarding devices configured to direct a packet to a destination external to a stack, as recited in amended independent claim 1. Further, the reference appears silent in regards to identifying an exception associated with the packet, and inserting a vector in a packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack, also recited by claim 1.

Kalkunte is not understood to remedy deficiencies of Salett. For example, Kalkunte does not disclose or suggest receiving a packet by a first device in a stack of packet forwarding

devices that are configured to direct the packet to a destination external to the stack. Furthermore, the reference does not disclose or suggest identifying an exception associated with a packet, and inserting a vector in the packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack, as recited by amended independent claim 1. Rather, Kalkunte describes a method of handling data packets in a series of network switches. In this regard, Kalkunte reads:

A module id bit map of the incoming data packet is resolved and a bit corresponding to the first switch of the module id bitmap is examined to determine if the bit is set. A destination address of the incoming data packet is resolved when the corresponding bit is set and the incoming data packet is forwarded or dropped based on the destination address. When the corresponding bit is not set, the incoming data packet is forwarded to a next switch of the series of network switches. A network switch configured to allow for cascading of data packets is also disclosed. (Kalkunte, abstract.)

Thus, Kalkunte describes sending data packets between source and destination network switches. Kalkunte is silent about packet forwarding devices that are configured to direct the packet to the destination external to a stack. Further, the reference is not understood to disclose or suggest identifying an exception associated with a packet, and inserting a vector in a packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack, as recited by amended independent claim 1.

Amended independent claims 8, 15, 18, 21 and 24 each contain subject matter similar to amended independent claim 1. These claims are also believed allowable for at least the reasons noted above.

Dependent claims 2-4, 9-11, 14, 16-17, 19-20, 22-23, and 25-26 are also believed to define patentable features of the invention. Each dependent claim is patentable at least for the reasons set forth in its corresponding independent claim and, as such, has not been addressed specifically herein.

Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salett-Kalkunte as respectively applied to claims 1 and 8 above, in view of Abali et al (US 5,721,820), hereafter Abali.

Abali is not understood to cure the deficiencies of Salett and Kalkunte. For example, Abali does not disclose or suggest receiving a packet by a first device in a stack of packet

forwarding devices that are configured to direct the packet to a destination external to the stack, identifying an exception associated with the packet, and inserting a vector in a packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack. Rather, the reference describes an adaptive routing method in which a routing message is generated to describe allowable pathways for routing a data message from source to a destination. In this regard, Abali reads:

A method for adaptive routing of messages in a computer network. The method provides adaptive source routing by generating at a source node a routing message describing a plurality of allowable paths via which data message can reach a desired destination. The data message and the routing message are sent by the source to a first switch, and the routing message is evaluated by control logic to determine if an available, allowable path exists. If so, the data message and routing message are sent via that path to the destination. (Abali, abstract.)

Accordingly, Abali individually, or in combination with Salett and Kalkunte, does not disclose or would not have made obvious the features of amended independent claims 1 and 8 from which claims 5, 6, 12 and 13 respectively depend.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-368-2191.


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No fees are believed due at this time. Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 10559-906001.

Respectfully submitted,

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